

# ASC2699C

## 2000 - 3000 MHz Cascade Amplifier



### Features: (typical values)

- Bandwidth ..... 2000-3000 MHz.
- Power Out ..... 31 dBm.
- Gain ..... 32 dB.
- Noise Figure..... 2.5 dB.
- IP<sub>3</sub> ..... 41 dBm.
- No external component required

### Maximum Ratings

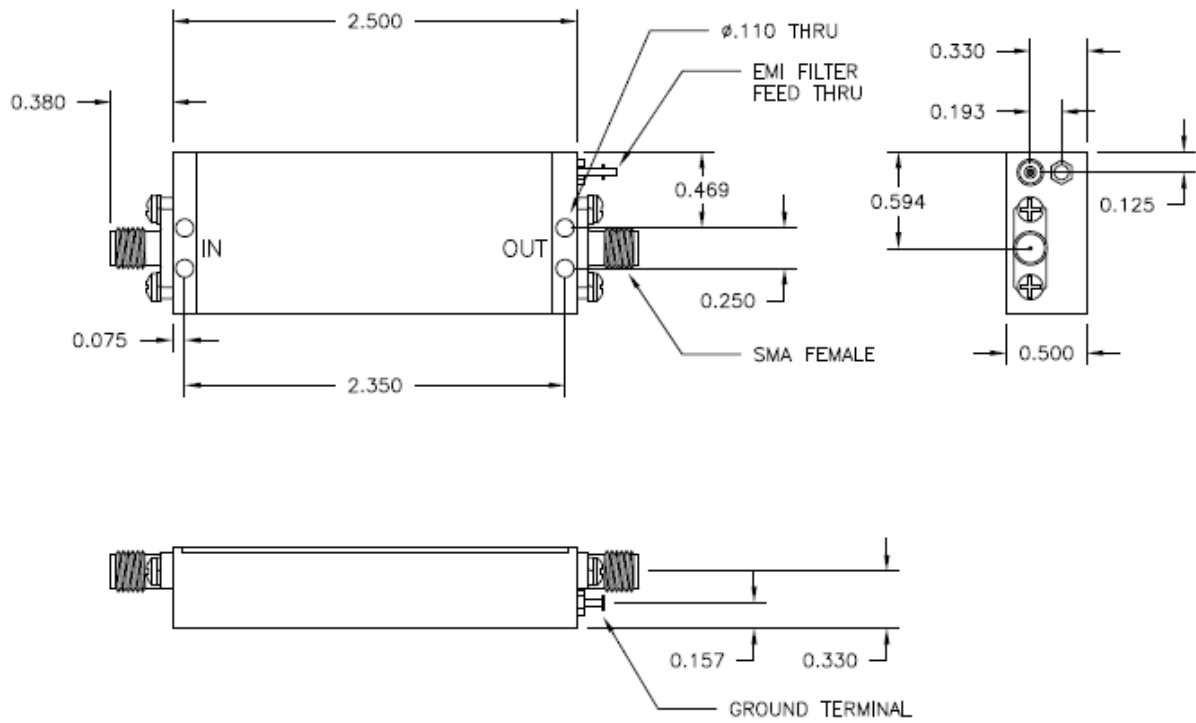
Storage Temperature ..... -62°C to +125°C  
 DC Voltage ..... +17 volts  
 RF Input Power ..... +30 dBm.  
 Case Temperature ..... +100°C

Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		2000	3000	MHz.
Gain	32	31	33	dB.
Gain Flatness	±0.5		±1.0	dB.
Gain Var. over temp	1.0			ΔdB.
Pout @ 1dB Comp	+31	+30		dBm.
Noise Figure	2.5		3.5	dB.
IP3	41	40		dBm.
IP2	62	60		dBm.
VSWR In/Out	1.6:1		1.8:1	
Supply Required	+15/600		+15/750	v/mA.

Min. and max. Values are from -20°C to +75°C  
 Limiter is required

# OUTLINE



**FINAL ELECTRICAL TEST REPORT**  
**RECORD DATA @ +25°C ONLY**

<b>TEST</b> Vdc +15V	<b>LIMITS</b> -20°C/+25°C/+75°C	<b>ACTUAL</b> <b>DATA</b>
Gain 2000 MHz to 3000 MHz	31.0 dB min 34.0 dB max	33.0 33.6
Gain Flatness 2000 MHz to 3000 MHz	± 1.0 dB max	±0.3
Spurious Response	Accept/Reject	AC
DC Current at +15 Vdc	750 mA max	558
Input VSWR 2000 MHz to 3000 MHz	1.8 : 1 max	1.66
Output VSWR 1000 MHz to 2000 MHz	1.8 : 1 max	1.52
Noise Figure 2000 MHz to 3000 MHz	3.5 dB max	2.09
P 1.0 dB Compression 2000 MHz to 3000 MHz	27.0 dBm min	>28.0
IP3 with Pout = +14.0 dBm each tone 1) F1/F2=2000/2001 MHz, Fc=1999/2002 MHz 2) F1/F2=3000/3001 MHz, Fc=2999/3002 MHz	40.0 dBm Min	41.5
IP2 with Pout = +14.0 dBm each tone 1) F1/F2=2000+2001 MHz, Fc=4001 MHz	60.0 dBm Min	70.0
Stability Test. For all frequency range where $ S_{21}  > 0\text{dB}$	0 dB max	<0
RF Input Power @ 2.5ghz	+30dbm Max	AC

FUNCTIONAL BLOCK DIAGRAM

